#AF 3738

PTO/SB/21 (08-00)

Please type a plus sign (+) inside this box → [+]

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/289,000
Filing Date	February 25, 1997
First Named Inventor	Blatt, Gerald
Group Art Unit	3738
Examiner Name	P. Prebilic
Total Number of Pages in This Submission	
Attorney Docket Number	16683-1-2

ENCLOSURES *(check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☒ Submittal of Appeal Brief in Triplicate, with three copies of Appeal Brief, and copy of Fee Transmittal dated October 28, 2002
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Assignment Papers *(for an Application)*
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below)*:

  Return Postcard

Remarks The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm and Individual name	Townsend and Townsend and Crew LLP J. Georg Seka Reg. No. 24,491
Signature	
Date	December 27, 2002

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

Typed or printed name	Jane Welch		
Signature		Date	December 27, 2002

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be send to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

SF 1418380 v1

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231, on this date: December 27, 2002

TOWNSEND and TOWNSEND and CREW LLP

By: _____

PATENT

Attorney Docket No. 16683-1-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Examiner: P. Prebilic
GERALD BLATT	Art Unit: 3738
Application No. 09/289,000	SUBMITTAL OF APPEAL BRIEF IN TRIPLICATE
Filed: February 25, 1997	
For: JOINT TREATING METHOD	

San Francisco, CA 94111
December 27, 2002

Box AF
Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to the Notice of Appeal filed October 29, 2002, applicant herewith submits his Appeal Brief in triplicate.

The Appeal Brief (in triplicate) was previously filed on August 28, 2002, one day prior to the filing of the Notice of Appeal. Although applicant requested that the previously filed Appeal Brief be considered filed with the Notice of Appeal, in an overabundance of caution the Appeal Brief is herewith being refiled.

Payment of the fee of $160 for filing the Appeal Brief was previously authorized (as evidenced by the Fee Transmittal dated October 28, 2002, a copy of which is attached hereto). If the fee for filing the Appeal Brief was previously charged, applicant submits that no additional fee for filing the Appeal Brief is required.

However, if the fee for filing the Appeal Brief has not been previously charged, or is nevertheless required, the Commissioner is authorized to charge the fee of $160, and any

additional fee that may be due during the pendency of this application, to Deposit Account No. 20-1430.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

J. Georg Seka
Reg. No. 24,491

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
JGS:jhw
SF 1418379 v1

PATENT

Attorney Docket No. 16683-1-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:	Examiner: P. Prebilic
GERALD BLATT	Art Unit: 3738
Application No. 09/289,000	APPELLANT'S BRIEF UNDER 37 CFR §1.192(a)
Filed: February 25, 1997	
For: JOINT TREATING METHOD	

San Francisco, CA 94111
December 27, 2002

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is an appeal brief in response to the Final Rejection dated July 30, 2002 in the above-captioned patent application.

I. REAL PARTY IN INTEREST:

Applicant and appellant, Gerald Blatt, is the sole owner of the above-captioned patent application and the real party in interest.

II. RELATED APPEALS AND INTERFERENCES:

There are no related appeals or interferences.

III. STATUS OF CLAIMS:

Claims 1-6, 8-10 and 24-31 are pending.

All claims stand finally rejected, and appellant appeals the rejection of these claims.

IV. STATUS OF AMENDMENTS:

An Amendment After Final Rejection and a request to amend drawing Figs. 1B-F have been filed on October 25, 2002.

The Amendment revises claims 1, 8, 25 and 26 as suggested on pages 2 and 3 of the Final Rejection. Since the Amendment fully complies with the proposals included in the Final Rejection, appellant anticipates notification that the only outstanding rejections to the claims are rejections under 35 USC §§102 and 103.

V. CLAIMS APPENDIX:

Attached hereto is a Claims Appendix with the current wording of the claims, including the changes to the claims proposed in the above referred to Amendment After Final Rejection.

VI. SUMMARY OF THE INVENTION:

The present invention biologically reconstitutes natural cartilage lost due to arthritis, trauma and the like with fibrocartilage. Fibrocartilage is a suitable joint surface for at least non-weight-bearing joints, such as, for example, knuckle joints, the wrist, shoulder joints, or the base of the thumb, which permits slidable movements between opposing and cooperating joint surfaces.

As a result, the present invention effects a resurfacing of cancellous bone surfaces with a layer of fibrocartilage that will permit a person to make normal use of at least non-weight-bearing joints.

The present invention is based on the recognition that the basic cell of healing, called fibroblast, will develop at any site of injury and results from the transformation of a normal blood clot. The fibroblast goes through a series of microscopic histological changes called fibroplasia. The fibroblast on a surface where it is subjected to constant motion will change and develop into fibrocartilage. This is a white, smooth substance that looks very much like cartilage.

The present invention maintains the mobility of the joint (which has lost its natural cartilage) by promoting the generation of a fibrocartilage layer over a resected bone surface.

To function substantially like a natural joint, the fibrocartilage layer must have a smooth surface that can slidably move relative to an opposing surface—initially, relative to the opposing surface of the implant and, after the resorption of the implant, relative to the opposing joint surface (which may be natural cartilage or another fibrocartilage grown in accordance with the present invention).

To attain this result, constant motion between the opposing surfaces, in a direction generally lateral to the longitudinal direction of the opposing bones at the joint, must be maintained while the fibrocartilage forms with the implant in place.

The application describes an embodiment of the invention, with reference to in vivo tests performed on rabbits, in which the concave surface 30 of a shoulder joint 32 shown in Fig. 3F, called the glenoid fossa, or the socket portion of the joint, was presumed to have worn or damaged cartilage that required replacement. The cartilage was removed with a power-driven bur 22 down to the cancellous bone to create a concave resected joint surface 34, as is described in the paragraph bridging pages 7 and 8 of this application.

A bioresorbable implant 23 with a domed head 24 as replacement for the head 14 of the humerus was attached to the humerus by first removing a portion of the humeral head with a saw 18, as is shown in Fig. 3A, to create a flat resected surface 20. A cavity 21 was formed at about the center of the resected surface 20 into the medullary canal, as shown in Fig. 2C, and the implant was mounted to the resected head 14 of the humerus to thereby reconstitute the rounded surface of the humeral head. Stem 26 of the implant locked it into the cavity 21 in the humerus and thereby attached the implant to the humerus, as seen in Figs. 3D and 3E and described on page 7, lines 14-33.

Following the mounting of the implant, the wound was closed, thereby bringing implant head 24 in direct contact with the exposed, resected, cancellous bone surface 34 of the glenoid fossa.

The joints of 18 test rabbits were inspected at 12-month, 18-month and 24-month intervals. A microscopic analysis after one year from the implantation of the implant showed evidence of fibrocartilage growth, although some fibroplasia remained. After 18 months, all fibroplasia had progressed into fibrocartilage 52, with about 75% of the implant absorbed,

while after two years from the operation, the fibrocartilage had taken on the appearance of actual hyaline cartilage and the implant had been effectively absorbed, as is summarized on page 8, last paragraph, to page 9, last full paragraph.

The experimental procedures conducted by appellant led to the conclusion that what is necessary is that a resected surface must rub or slide against a bioresorbable implant to create the fibrocartilage. (Page 10, lines 31-33).

VII. THE APPLIED PRIOR ART:

The rejection of the appealed claims principally relies on the Cohen patent (5,207,712).

All claims were rejected over Cohen alone, except for claims 2 and 3, which were rejected over Cohen and the Delcommune patent (5,007,939).

Cohen discloses joint implants for the lesser digits and metatarsal phalangeal joints of a foot by first resecting opposing bone ends to expose cancellous bone. An implant 70 (Fig. 10) has a ball 4 (Fig. 1) and solid rods 2 which are integral with and project in opposite directions from the ball. The solid rods are inserted into holes drilled in the respective resected bones. After the solid rods of the implant have been inserted in the drilled holes, ball 4 maintains the spacing between the opposing, resected bone ends. Over time, fibrous tissue forms around the implant and eventually replaces it. Thus, with the implant in place, the opposing resected bone ends (illustrated in Fig. 10) are kept spaced apart by the implant, while the solid rods extend into the previously drilled holes in the bones. Ball 4 determines the size of the gap or spacing between the resected bone ends.

The ball located between and engaged by the opposing bone ends does not constitute a surface with respect to which one or the other bone can slide.

The portion of the Delcommune patent relevant to the present invention, and relied upon in the rejection of dependent claims 2 and 3, discloses the use of lactic acid polymer for use as biodegradable implants and prostheses.

VIII. THE REJECTION OF THE CLAIMS:

In the Final Rejection dated July 30, 2002, claims 1, 4-6, 8-10 and 24-31 were rejected for anticipation by or obviousness over Cohen because Cohen discloses "the resection of bone ends or the holes drilled into the bone ends expose the cancellous bone surface and the solid sphere and rods allow both for the joint to flex and extend after implantation (see column 4, lines 38 and 39) and the ball (4) provides a sliding surface for the joint ends ...." (Final Rejection, sentence bridging pages 3 and 4 thereof).

Alternatively, the rejection is based on the observation that "one could view the ball (4) as not providing a sliding surface because it is not explicitly stated as providing such. However, the Examiner posits that one viewing this embodiment would be led to the conclusion that the ball (4) obviously functions as a stop and sliding surface for the resected bone ends because the joint flexes and extends around the ball surface; see column 4, lines 38-39."

Dependent claims 2 and 3 were rejected under 35 USC §103 for obviousness over Cohen in view of Delcommune because Delcommune "teaches that it has been known to use lactic acid polymer or copolymer for resorbable bone repair devices". (Final Rejection, page 4, third and second lines from the bottom).

IX. ISSUES PRESENTED:

1. Are claims 1, 4-6, 8-10 and 24-31 anticipated under 35 USC §102(b) by Cohen?

2. Are claims 1, 4-6, 8-10 and 24-31 obvious under 35 USC §103(a) over Cohen?

3. Are claims 2 and 3 obvious under 35 USC §103(a) over Cohen in view of Delcommune?

X. GROUPING OF CLAIMS:

All claims stand or fall together.

XI. ARGUMENT:

1. *Claims 1, 4-6, 8-10 and 24-31 are not anticipated by Cohen because Cohen does not disclose all limitations of the independent claims.*

Independent claims 1, 8, 24, 25 and 26 are all limited to a method for treating a joint involving:

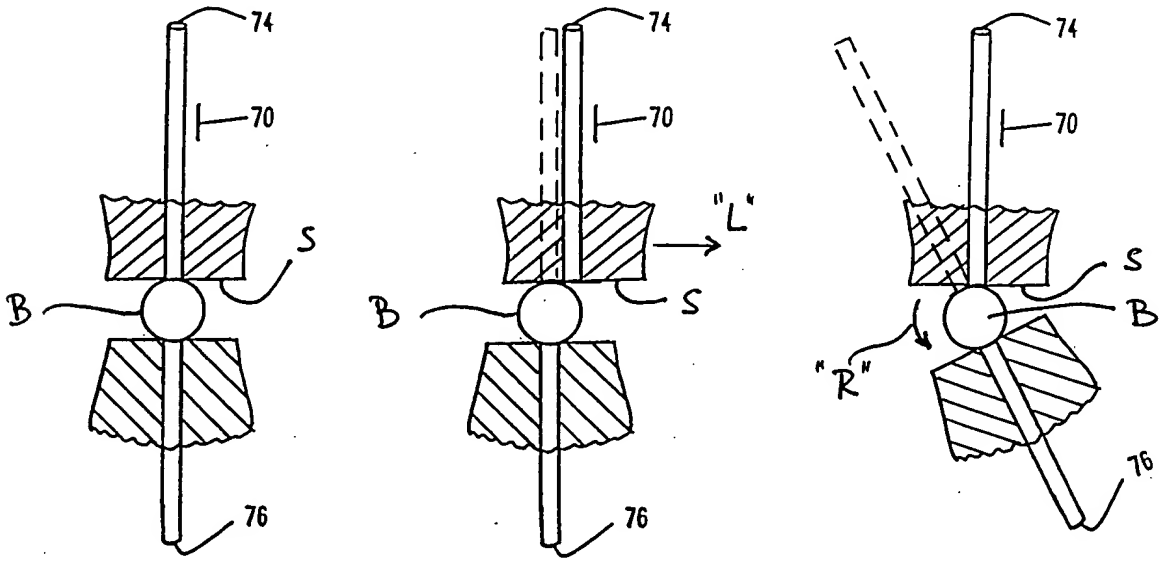
- removing at least a portion of one of the joint surfaces to expose cancellous bone
- placing a bioresorbable implant between opposing joint surfaces while permitting relative slidable motion between a face of the implant and the opposing cancellous bone surface
- using the joint during resorption of the implant and causing slidable motions between the implant face and the opposing cancellous bone surface
- allowing the formation of fibroblast on the cancellous bone surface while using the joint so that the fibroblast progresses into fibrocartilage as the implant is resorbed, the fibrocartilage replacing the implant during resorption and thereafter permitting relative slidable motions between the bones along the fibrocartilage when using the joint

As is recited in all independent claims, a requisite for practicing the claimed method is to position the resorbable implant so that at least one of its faces is opposite a previously resected and now cancellous bone, and permitting slidable motions between the face of the implant and the cancellous bone, so that fibroblast that initially forms on the cancellous bone transforms over a period of time into fibrocartilage.

The anticipation rejection of the claims is based on the Examiner's position that Cohen's solid sphere 4 and rods 2 projecting therefrom allow the joint to flex and extend after implantation, and that the ball provides a sliding surface for the joint ends.

Fig. 10 of Cohen illustrates the implant with projecting rods and how the bones are resected. The text of the patent states that the "uni-stemmed implant 70 is fit into the reamed holes 62, 64 with the central sphere 72 centered in the joint". (Column 4, lines 15-16).

Fig. A1 below is an adaptation of Fig. 10 of Cohen and shows the implant anchored in the opposing bones. The outer surface of the ball tangentially abuts against the resected bone surfaces, and rods 74, 76 projecting from the ball are disposed inside holes (identified in Cohen's Fig. 10 by reference numbers 62 and 64) drilled into the opposing, resected bone ends.



(1) (2) (3)

FIG. A

As is immediately apparent from viewing the illustrations of Fig. A, it is impossible for the resected implant surface S to slide relative to the periphery of ball B. If the surface S (or for that matter both resected surfaces of the opposing bones) were to slide relative to the periphery of the ball, rod 74 would have to be sheared off before slidable motion is possible.

Fig. A2 illustrates what happens if surface S were to slide linearly sideways with respect to ball B in the direction of arrow "L" (parallel to surface S). Rod 74 would necessarily have to move to the right, as seen in Fig. 2A, relative to ball B. The original position of rod 74 is shown in phantom lines. Such motion is only possible by shearing rod 74 off ball B.

Fig. A3 illustrates what happens if surface S remains stationary and ball B, with rod 76 and the bone the rod is anchored in, were to pivot clockwise about the center of the ball in the

direction of arrow "R" into an inclined position so that the periphery of ball B rotatably slides relative to resected bone surface S. In such an event, rod 74, which is aligned with rod 76, as is shown in phantom lines in Fig. A3, would become angularly inclined relative to rod 76. Such a motion is again only possible by shearing rod 74 off ball B.

There are no other possibilities for obtaining slidable motion between resected bone surface S and ball B of the Cohen implant. If, as the Examiner stated in the Final Rejection, slidable motion takes place between the resected bone surface and the ball, such motion necessarily destroys the implant itself. The resulting implant fragments and sheared-off, rough implant surfaces would damage surrounding tissue and would no doubt result in excruciating pain for the patient. In the context of reconstructing a damaged joint, even considering such a procedure is against common sense.

Thus, the implant disclosed in Cohen does not permit "relative slidable motion between the face and the cancellous bone surface", as is recited in independent claim 1. Cohen therefore also does not disclose "using the joint while allowing resorption of the implant and causing slidable motions between the face [of the implant] and the cancellous bone surface", as is further recited in claim 1.

The remaining independent claims each have analogous limitations, although they employ slightly different terminology.

Independent claim 8 recites "placing the first and second implant faces of the bioresorbable implant between and against the first and second exposed cancellous bone surfaces so as to permit relative slidable motion between the first and second faces and the first and second cancellous surfaces; using the joint and causing slidable motions between the face and the first cancellous surfaces; and while using the joint, allowing formation of the fibrocartilage ...."

Independent claim 24 recites in this regard providing the implant with at least one face so that it "can slidably move relative to the at least one degenerated cancellous bone surface, allowing the face to slidably move relative to the at least one degenerated cancellous bone surface, and permitting growth of fibroblast ... during the allowing step ...."

Independent claim 25 recites "permitting relative slidable motion between the face [of the implant] and the exposed cancellous bone surface; using the joint while allowing resorption of the implant and slidably moving the face relative to the exposed cancellous bone surface; [and] allowing formation of fibroblast which progresses into fibrocartilage while ... continuing to slidably move the face relative to the exposed cancellous bone surface ...."

Finally, independent claim 26 recites in relevant parts that "the implant initially keeps said surfaces spaced apart and the face is slidably movable relative to the cancellous bone surface; using the joint while allowing resorption of the implant, including slidably moving the face relative to the cancellous bone surface; and allowing formation of fibroblast which progresses into fibrocartilage while using the joint as the implant is resorbed to replace the implant and maintain relative slidable motion between the bones along the fibrocartilage".

Cohen does not teach that there should be relative slidable motion between the surface(s) of the implant and the opposing, cancellous bone surface(s). In addition, as was demonstrated above and is apparent from Fig. A, it is impossible for the ball of Cohen between resected bone surfaces to slidably move relative to the bone surfaces.

In the first line of page 4 of the Final Rejection, the Examiner asserts that the ball of Cohen "provides a sliding surface for the joint ends". The portions of Cohen relied on by the Examiner for support of this assertion nowhere disclose or in any form suggest that slidable motion between the implant and the bone surfaces as defined in the independent claims on appeal takes place.

Specifically, in column 3, lines 18-20 of Cohen, relied upon by the Examiner, state:

> Fig. 1 shows a solid rod 2 of approximately 1.00 mm diameter, comprising a solid 1.3-1.5 mm ball 4 in the center of the rod's longitudinal axis.

There is no mention of slidable motion in this part or any other part of Cohen.

Column 4, lines 3-39 of Cohen, also relied on by the Examiner, nowhere state that slidable motion takes place between the implant and the opposing bone surface. This portion of Cohen includes the statement that "[f]lexion and extension of the joint should not result in

dislocation of the implant." (Column 4, lines 38-39). This statement also does not indicate that slidable motion takes place.

Finally, the Final Rejection relies on the disclosure in Figs. 1-3 and 8-11 of Cohen. None of these figures show or even remotely suggest that slidable motion between the implant and the opposing bone surfaces takes place. Quite to the contrary, the figures make clear that slidable motion is not possible, as is demonstrated by Fig. A on page 7 of this brief and the accompanying text.

In view thereof, appellant submits that none of independent claims 1, 8 and 24-26, and therewith none of the claims that depend from them, are anticipated by Cohen and requests that the anticipation rejection of claims 1, 4-6, 8-10 and 24-31 be reversed.

2. *Claims 1, 4-6, 8-10 and 24-31 are not obvious under Section 103 over Cohen.*

In the obviousness rejection, the Final Rejection implicitly concedes that ball 4 of Cohen does not provide a sliding surface because "it is not explicitly stated as providing such. However, the Examiner posits that one viewing this embodiment would be led to the conclusion that the ball (4) obviously functions as a stop and a sliding surface for the resected bone ends because the joint flexes and extends around the ball surface ...." (Page 4, lines 4-7).

Here the rejection is based on the earlier quoted statement in column 4 of the Cohen patent that "flexion and extension of the joint should not result in dislocation of the implant". (Cohen, column 4, lines 38-39).

This statement, not otherwise explained in the Cohen patent, cannot overcome the impossibility of slidable motion which was discussed above in connection with and is shown by Fig. A. It is a physical impossibility to obtain slidable motion between the surface of ball B and the opposing resected bone surface S, because if slidable motion were attempted one of the rods projecting from the ball must first be sheared off, thereby destroying the implant.

This impossibility to generate slidable motion is confirmed by declarations of two persons highly skilled in the art and familiar with implants of this type. The inventor, Blatt, a medical doctor who has been a practicing orthopedic surgeon since 1969, states in relevant parts of his Rule 132 Declaration attached to the Amendment dated April 30, 2001:

With the implant of Cohen, there is no possibility that the opposing resected surfaces of the bones can slidably move relative to each other. Solid rods (2) are immovably anchored in the respective holes drilled into the opposing bones. When the bones are moved together (following completion of the operation), ball (4) between the opposing resected bone surfaces is not a slide surface or a pivot point ....

I disagree, for the reasons stated above, that the solid sphere and rods [of Cohen] allow both for the joint to flex and extend after implantation. The reference to column 4, lines 38 and 39 does not support this conclusion. Lines 37-39 state: "After placement, the stability and position of the toe is checked. Flexion and extension of the joint should not result in dislocation of the implant." This does not mean that the resected bone surfaces can flex with respect to each other after the solid sphere and rods have been implanted. To me, as one skilled in the art, this statement means that the Cohen implant is intended to prevent action, i.e. flexion and extension, because the goal is a fusion of the joint and not the creation of a flexible (articulating) joint.

I reach this conclusion because to me, as one skilled in the art, this is the only possible result when using the implant of Cohen. Moreover, the Cohen patent nowhere states or in any form suggests that the use of the implant leads to an articulating joint. Quite to the contrary, Cohen states amongst others that the "metatarsal implant of a biodegradable substance ... would eventually be replaced by mature fibrous tissue" (column 2, lines 26-28). A similar statement appears in column 2, lines 45-47 of Cohen. These statements mean, and are understood by me as one skilled in the art to mean, that the joint between the opposing bones is eventually replaced by fibrous tissue, but this fibrous tissue does not have cooperating, articulating surfaces.

Upon careful consideration I conclude that Cohen's statement "flexion and extension of the joint should not result in dislocation of the implant" ... means that when the patient flexes or extends the toe, the resulting forces applied to the implant should not result in its dislocation. In other words, the implant must be capable of withstanding such forces, thereby preventing motion and enabling a fusion of the bones by growing fibrous tissue between them. (Blatt Rule 132 Declaration, page 3, lines 1-5 and last paragraph on page 3 to end of second full paragraph on page 4 of the Declaration)

A further Rule 132 Declaration (attached to the Amendment filed December 12, 2001) by Ronald W. Smith, an orthopedic surgeon with over more than 20 years experience, an associate clinical professor at the University of California is Los Angeles (UCLA), and a codirector of the orthopedic foot clinic of Harbor UCLA Medical Center in Torrance, California, states as follows in regard to whether or not the Cohen patent permits slidable motion between the ball and the opposing bone surfaces:

> The Cohen patent teaches the use of an implant between resected ends of opposing bones that has a spacer with stems that extend from the spacer and penetrate into the opposing bones to promote stability and alignment. The Cohen implant is designed to meet the stability requirements of the foot, which differ significantly from the motion requirement for implants implanted in finger joints, for example. Nowhere in the Cohen patent do I find an intent for or capability of a Cohen implant to promote or permit articular motion. (Smith Rule 132 Declaration, page 2, fourth paragraph)
>
> The "solid" rods of the Cohen patent that project from the central spacer and extend into drilled holes in the opposite bone ends prevent slidable motion between the face of the implant and the opposing surface of the cancellous bone, including any fibrous tissue that may form thereon, thereby also preventing the generation of any surface by the fibrous tissue that can accommodate relative slidable motion. As discussed above, the Cohen implant leads to the formation of a continuous fibrous tissue body that extends from one bone end to the other, opposite bone end.
>
> In contrast to Cohen, the implant used in the method of the Blatt application has a face that is free to slide relative to the opposing, cancellous bone surface, and fibrous tissue growing thereon, because there is no stem that extends from the implant face into the opposing bone. As described in the Blatt application, this leads to the formation of a fibrocartilage surface that permits painfree slidable motion between the face of the implant and the opposing surface of the bone. This cannot be achieved with the Cohen implant. (Smith Rule 132 Declaration, page 4, last full paragraph, to page 5, line 4)

As two highly skilled orthopedic surgeons with a combined experience of over 60 years make clear, Cohen does not disclose or in any form suggest to one of ordinary skill in the art an

implant which has a face that can slide relative to the opposing bone surface. This is also fully supported by logic and the explanation relating to and illustrations of Fig. A on page 7 above.

Nevertheless, in the Final Rejection the Examiner dismissed irrefutable facts, supporting declaration evidence, as well as logic, and stated that "Cohen suggests otherwise by stating that flexion and extension occur after implantation; see column 4, lines 38-39. Due to this disclosure of Cohen, the Examiner maintains that objective actual proof is necessary to show that Cohen lacks sliding motion and fails to perform in the manner Cohen states." (Final Rejection, page 5, lines 10-14). The subjective actual proof was provided by the two Rule 132 Declarations on file, sound technical understanding as embodied in Fig. A above, and logic.

The Examiner chose to disregard the evidence in order to maintain the rejection.

In view of the foregoing, appellant submits that Cohen does not render claims 1, 4-6, 8-10 and 24-31 obvious and requests a reversal of the obviousness rejection of the claims.

3. *Claims 2 and 3 are not obvious under 35 USC §103(a) over Cohen in view of Delcommune.*

Claims 2 and 3 depend from claim 1. As demonstrated above, claim 1 is neither anticipated by nor obvious over Cohen because Cohen neither discloses nor suggests an implant with a face that is slidable relative to the opposing cancellous bone surface. Delcommune adds nothing to Cohen in this regard.

Accordingly, claims 2 and 3 are not obvious over Cohen and Delcommune for the same reasons why their parent claim 1 is not obvious over Cohen.

XII. CONCLUSION:

Claims 1, 4-6, 8-10 and 24-31 are not anticipated by Cohen.

Claims 1, 4-6, 8-10 and 24-31 are not obvious over Cohen.

Claims 2 and 3 are not obvious over Cohen in view of Delcommune.

Accordingly, the rejection of all appealed claims should and appellant requests that they be reversed.

Respectfully submitted,

J. Georg Seka
Reg. No. 24,491

(resigned on 12/27/02)

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
JGS:jhw
SF 1399691 v1

CLAIMS APPENDIX
(current wording of all pending claims)

1. A method for treating a joint formed by opposing bones having first and second mating joint surfaces so that relative slidable joint motion between the bones is permanently maintained comprising the following steps:

removing at least a portion of the first joint surface to expose a cancellous bone surface;

selecting a bioresorbable implant having a face adapted to face the cancellous bone surface;

placing the bioresorbable implant between and in contact with the second joint surface and the cancellous bone surface so that the face is opposite the cancellous bone surface and the implant initially keeps said exposed cancellous bone surface spaced apart from the second joint surface while permitting relative slidable motion between the face and the cancellous bone surface;

using the joint while allowing resorption of the implant and causing slidable motions between the face and the cancellous bone surface; and

allowing formation of fibroblast at the cancellous bone surface while using the joint so that the fibroblast progresses into fibrocartilage as the implant is resorbed, the fibrocartilage replaces the implant during such resorption, and thereafter relative slidable motion between the bones along the fibrocartilage occurs when using the joint.

2. The method of claim 1 further comprising the step of selecting the bioresorbable implant made of a polymer of lactic acid.

3. The method of claim 2 wherein the selecting step is carried out by selecting a lactic acid copolymer.

4. The method of claim 1 further comprising the steps of:

estimating the period time it will take for the fibroblast to progress into fibrocartilage; and

selecting the bioresorbable implant of a size, shape and material according to said period of time.

5. The method of claim 1 further comprising the step of ensuring the exposed cancellous bone surface and the face of the bioresorbable implant placed against said cancellous bone surface have complementary surface shapes.

6. The method of claim 5 wherein the ensuring step includes the step of selecting curved surface shapes as said complementary surface shapes.

8. A method for treating a substantially non-weight bearing arthritic joint having first and second mating joint surfaces so that relative slidable joint motion between the bones is permanently maintained comprising the following steps:

removing at least a portion of the first and second joint surfaces to expose first and second cancellous bone surfaces;

selecting a bioresorbable implant having first and second implant faces corresponding to the first and second cancellous bone surfaces;

placing the first and second implant faces of the bioresorbable implant between and against the first and second exposed cancellous bone surfaces so as to permit relative slidable motion between the first and second faces and the first and second cancellous surfaces;

using the joint and causing slidable motions between the face and the first cancellous surfaces; and

while using the joint, allowing formation of fibrocartilage at each said cancellous bone surface as the implant is resorbed to thereby replace the implant during such resorption and enable slidable motion between the bones along the formed fibrocartilage.

9. The method of claim 8 wherein the selecting step is carried out by selecting said bioresorbable implant having a generally semi-spherically shaped surface as the first implant surface.

10. The method of claim 8 further comprising the steps of:

estimating the period of time it will take for the fibroblast to progress into fibrocartilage; and

selecting the bioresorbable implant of a size and material according to said period of time.

24. A method for treating at least one degenerated surface on a cancellous bone, the cancellous surface being one of first and second relatively slidably movable surfaces defining a body joint, so that slidable joint motion between the bones is permanently maintained, the method comprising the steps of resecting the bone to form the at least one degenerated cancellous bone surface, placing a bioresorbable implant between the at least one degenerated cancellous bone surface and the second surface to thereby space the surfaces apart, providing the implant with at least one face which is opposite and shaped complementary to at least one degenerated cancellous bone surface so that the implant can slidably move relative to the at least one degenerated cancellous bone surface, allowing the face to slidably move relative to the at least one degenerated cancellous bone surface, permitting growth of fibroblast on the at least one cancellous surface and conversion of the fibroblast into fibrocartilage during the allowing step, maintaining a spacing between the body joint defining surfaces during the permitting steps, and waiting for the body to gradually resorb the implant during the allowing and permitting steps so that, upon resorption of the implant, the fibrocartilage forms at least one of the body joint defining surfaces and slidable motion between the bones along the fibrocartilage occurs.

25. A method for treating a joint having first and second mating joint surfaces so that slidable joint motion between the bones is permanently maintained comprising the following steps:

removing at least a portion of the first joint surface to generate an exposed cancellous bone surface;

placing a bioresorbable implant between and in contact with the exposed cancellous bone surface and the second joint surface so the implant initially keeps said exposed cancellous bone surface spaced apart from the second joint surface;

providing the implant with a face which is opposite the exposed cancellous bone surface;

permitting relative slidable motion between the face and the exposed cancellous bone surface;

using the joint while allowing resorption of the implant and slidably moving the face relative to the exposed cancellous bone surface;

allowing formation of fibroblast which progresses into fibrocartilage while using the joint as the implant is resorbed and continuing to slidably move the face relative to the exposed cancellous bone surface;

following the resorption of the implant continuing to slidably move the second surface along the formed fibrocartilage;

estimating the period of time it will take for the fibroblast to progress into fibrocartilage; and

selecting the bioresorbable implant of a size, shape and material according to said period of time.

26. A method for treating a joint having first and second mating joint surfaces carried by cancellous bone so that slidable joint motion between the bones is permanently maintained comprising the following steps:

removing at least a portion of the first joint surface to expose a cancellous bone surface;

forming a cavity into the medullary canal of the cancellous bone carrying the second joint surface;

selecting a bioresorbable implant configured to fit between the cancellous bone surface and the second joint surface, the implant having a face, a backside and a stem portion extending from the backside and configured to fit within said cavity;

inserting the stem portion into the cavity and placing the bioresorbable implant between the cancellous bone surface and the second joint surface so the implant initially keeps said surfaces spaced apart and the face is slidably movable relative to the cancellous bone surface;

using the joint while allowing resorption of the implant, including slidably moving the face relative to the cancellous bone surface; and

allowing formation of fibroblast which progresses into fibrocartilage while using the joint as the implant is resorbed to replace the implant and maintain relative slidable motion between the bones along the fibrocartilage.

27. A method according to claim 1 including permitting slidable motion between the face and the first joint surface in a lateral direction.

28. A method according to claim 8 including placing the first and second implant surfaces so as to permit relative slidable motion between the first and second faces and the first and second joint surfaces in a lateral direction.

29. A method according to claim 24 including allowing the face to move relative to the at least one of the first and second surfaces in a lateral direction.

30. A method according to claim 25 including permitting relative slidable motion between the face and the first surface in a lateral direction.

31. A method according to claim 26 including permitting the face to slidably move relative to the first joint surface in a lateral direction.